DEPARTMENT OF TRANSPORTATION
DIVISION OF ENGINEERING SERVICES
Office of Structural Materials
Quality Assurance and Source Inspection

Bay Area Branch
690 Walnut Ave.St. 150
Vallejo, CA 94592-1133
(707) 649-5453
(707) 649-5493

Contract #: 04-0120F4
Cty: SF/ALA Rte: 80 PM: 13.2/13.9
File #: 1.28

WELDING INSPECTION REPORT

Resident Engineer: Casey, William
Address: 333 Burma Road
City: Oakland, CA 94607

Report No: WIR-026496
Date Inspected: 05-Oct-2011

Project Name: SAS Superstructure
Prime Contractor: American Bridge/Fluor Enterprises, a JV
Contractor: American Bridge/Fluor Enterprises, a JV

OSM Arrival Time: 700
OSM Departure Time: 1730
Location: Job Site

CWI Name: See Below

Inspected CWI report:	☐ Yes	☑ No	☐ N/A	**CWI Present:**	☑ Yes	☐ No	
Electrode to specification:	☑ Yes	☐ No	☐ N/A	**Rod Oven in Use:**	☑ Yes	☐ No	☐ N/A
Qualified Welders:	☑ Yes	☐ No	☐ N/A	**Weld Procedures Followed:**	☑ Yes	☐ No	☐ N/A
Approved Drawings:	☑ Yes	☐ No	☐ N/A	**Verified Joint Fit-up:**	☑ Yes	☐ No	☐ N/A
				Approved WPS:	☑ Yes	☐ No	☐ N/A
				Delayed / Cancelled:	☐ Yes	☑ No	☐ N/A

Bridge No: 34-0006
Component: OBG

Summary of Items Observed:

At the start of the shift the Quality Assurance Inspector (QAI) traveled to the SAS project site and observed the work and the inspection performed by American Bridge/Fluor Enterprises (AB/F) personnel. The inspection was performed as noted below:

A). OBG W12/W13

This QA SPCM Lead Inspector assigned QAI Craig Hager to observed the seal welding of the Seismic Performance Critical Member (SPCM) field splice identified as 12W-13W-A. The welding was performed utilizing the Flux Cored Arc Welding w/gas (FCAW-G) as per the Welding Procedure Specification (WPS) ABF-WPS-D15-F3200-2, Rev. 0 which was utilized by the QC Inspector, William Sherwood, as a reference to monitor the welding, verify the welding parameters and the preheat and interpass temperatures. The QAI also observed and monitored the inspection performed by the QC inspector.

Later in the shift, this QA SPCM Lead Inspector also observed the QAI, Mr. Hager, monitor the work performed by the QC inspector and at random intervals observed Mr. Hager verify the welding parameters, the minimum preheat and maximum interpass temperatures. At the conclusion of the shift this QAI SPCM Lead Inspector discussed and reviewed the work performed by QAI Craig Hager in regards to verifying the WPS's, electrodes, welding parameters, preheat and interpass temperatures in regards to the work described above. The QAI observations of the QC inspection and verification of the welding parameters performed on this date appeared to comply with the contract specifications and AWS D1.5-Section 12.16, 2002 with no issues noted on this date.

B). OBG E12/E13

The approval was acquired to proceed with welding of this "A" deck field splice and was received via e-mail from QA Supervisor, William Levell, at approximately 1200, which was a forwarded message from Karen Wang. Upon the approval, this QA SPCM Lead Inspector assigned QAI William Clifford to observed the seal welding of the SPCM field splice identified as 12E-13E-A. The welding was perfomed utilizing the Flux Cored Arc Welding w/gas (FCAW-G) as per the Welding Procedure Specification (WPS) ABF-WPS-D15-F3200-2, Rev. 0 which was utilized by the QC Inspector, William Sherwood, as a reference to monitor the welding, verify the welding parameters and the preheat and interpass temperatures. The QAI also observed and monitored the inspection performed by the QC inspector.

Later in the shift, this QA SPCM Lead Inspector also observed the QAI, Mr. Clifford, monitor the work performed by the QC inspector and at random intervals observed Mr. Clifford verify the welding parameters, the minimum preheat and maximum interpass temperatures. At the conclusion of the shift this QAI SPCM Lead Inspector discussed and reviewed the work performed by QAI William Clifford in regards to verifying the WPS's, electrodes, welding parameters, preheat and interpass temperatures in regards to the work described above. The QAI observations of the QC inspection and verification of the welding parameters performed on this date appeared to comply with the contract specifications and AWS D1.5-Section 12.16, 2002 with no issues noted on this date. This QAI SPCM Lead Inspector discussed and reviewed the work performed by QAI William Clifford in regards to verifying the WPS's, electrodes, welding parameters, preheat and interpass temperatures in regards to the work described above. The QAI work performed on this date appeared to comply with the contract specifications and AWS D1.5-Section 12.16, 2002 with no issues noted on this date.

C). Review of QA Tracking Plan

This QA Inspector continued the daily review of field inspection reports and update of the field document control tracking records regarding the Orthotropic Box Girders (OBG, Longitudinal and Transverse "A" Deck Stiffeners, Deck Access Holes and the Tower Shear plates. The QAI also updated the tracking records for the pipe welds and the pipe supports.

On this date the QAI commence the review of QA tracking documents for the OBG's identified as E3, E4 and E5.

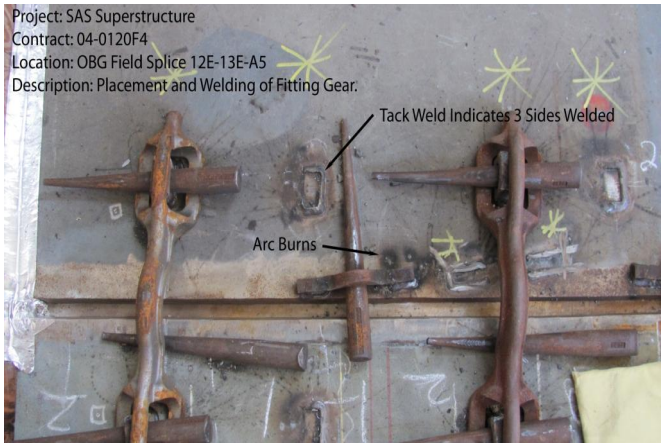
QA Summary

The welding was performed in the vertical position utilizing the E7018-H4R. The 3.2 mm H4R electrodes were stored in a electrically heated, thermostatically controlled oven after the removal from the sealed containers. The exposure limits of the electrodes appeared to comply with the minimum storage oven temperature of 120 degrees Celsius as per the contract documents. The welding parameters and surface temperatures were verified by the QC inspector's utilizing a Fluke 337 clamp meter to measure the electrical welding parameters and Tempil Heat Indicators for verifying the preheat and interpass temperatures. At the time of the observation no issues were noted by the QAI.

The digital photographs below illustrate some of the work observed during this scheduled shift.

WELDING INSPECTION REPORT

(Continued Page 3 of 3)



Summary of Conversations:

There were general conversations with Quality Control Lead Inspector, Bonifacio Daquinag, Jr., at the start of the shift regarding the location of welding, inspection personnel scheduled for this shift.

Comments

This report is for the purpose of determining conformance with the contract documents and is not for the purpose of making repair or fit for purpose recommendations. Should you require recommendations concerning repairs or remedial efforts please contact Nina Choy (510) 385-5910, who represents the Office of Structural Materials for your project.

Inspected By:	Reyes,Danny	Quality Assurance Inspector
Reviewed By:	Levell,Bill	QA Reviewer